



SWEN90016

# Software Processes & Project Management

SDLC Process  
Language Research Case Study  
Assignment 1



# Today's aim

Understand the differences between the SDLC  
and when to use which one



# Quiz time

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Which of the following are an example of a formal model? Choose all that are correct.

- a) V-model
- b) Agile
- c) Incremental
- d) Hybrd
- e) Waterfall

from Lecture 2, slide 27



# Quiz time

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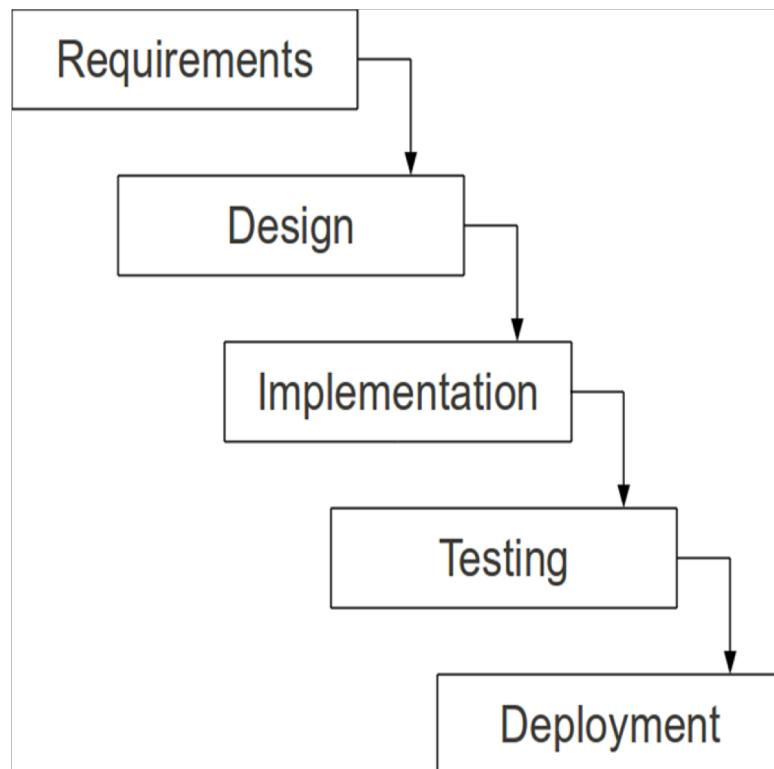
## When should you choose a Formal Model?

- a) Stable, precise and known requirements
- b) Customer gives time to project
- c) Mature technologies and tools
- d) Client has a prescriptive model established
- e) a & c

from Lecture 2, slide 27



## What are the Advantages?



## What are the Disadvantages?



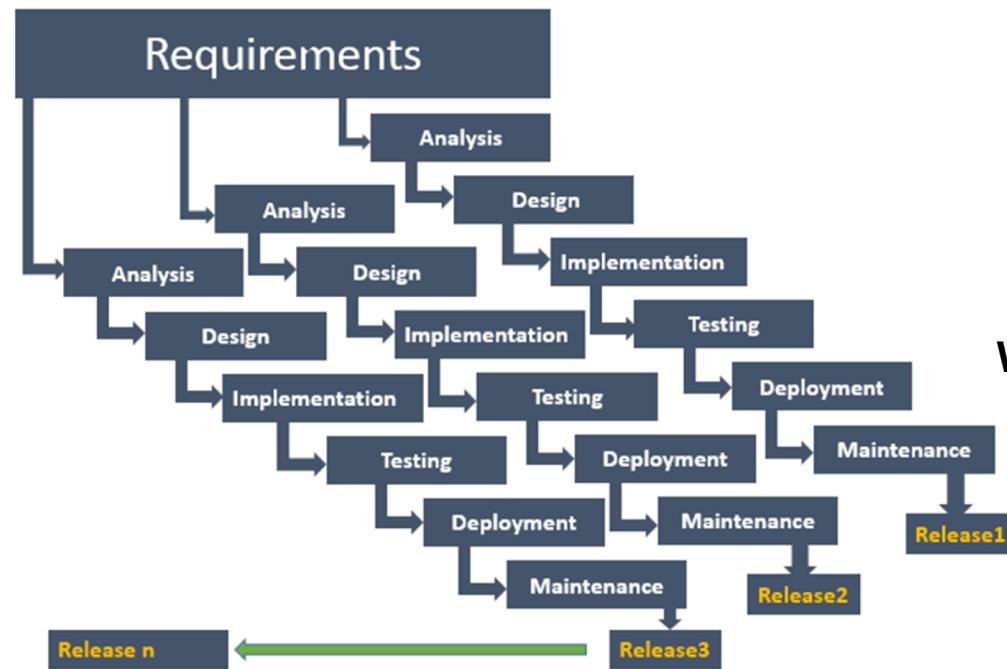
# Incremental

Requirement - partition into segments

Releases - mini waterfall process

Integrate modules

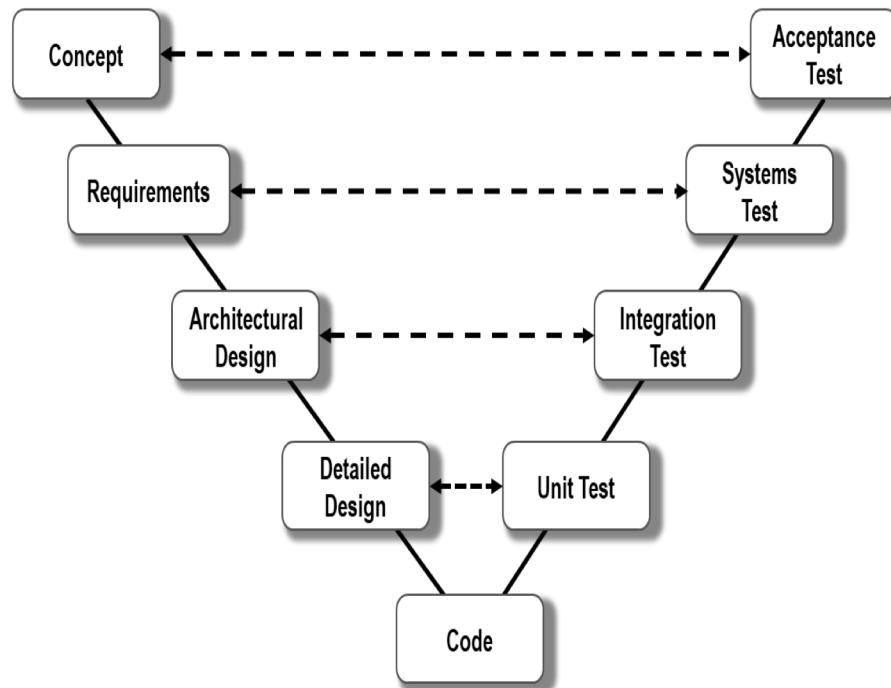
**What are the Advantages?**



**What are the Disadvantages?**

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waterfall model plus defined artifact deliverable  
development stage ← → testing phase



What are the Advantages?

What are the Disadvantages?



# Quiz time

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## When should you choose agile?

- a) Requirements continue to emerge
- b) Customer gives time to project
- c) Mature technologies and tools
- d) Change is welcome
- e) a & b & d

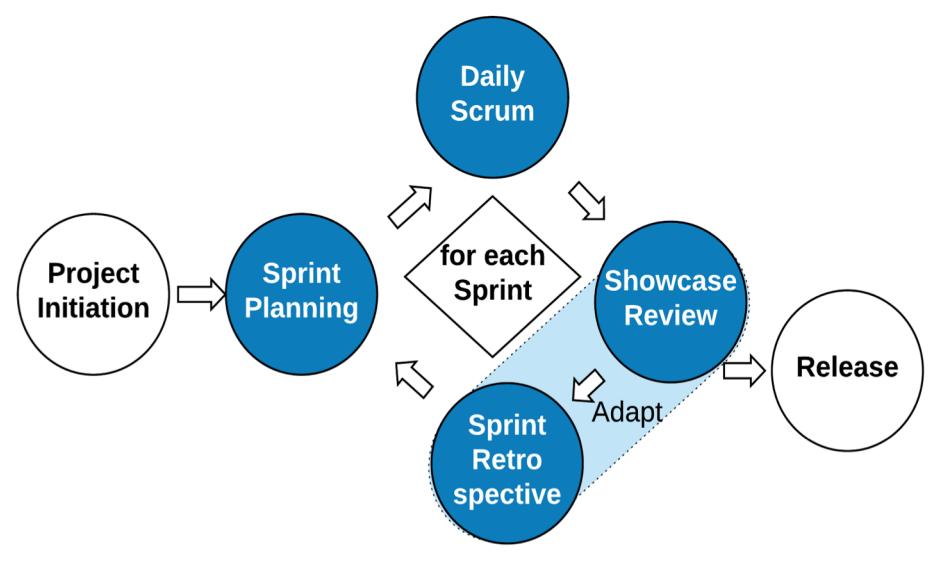
from Lecture 2, slide 27



**Scrum:** method to organize working teams

**XP:** method to improve code quality

**What are the Advantages?**

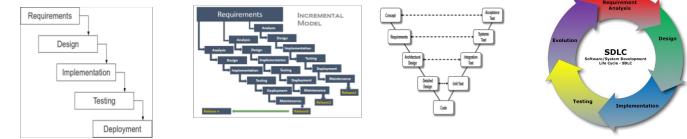


**What are the Disadvantages?**

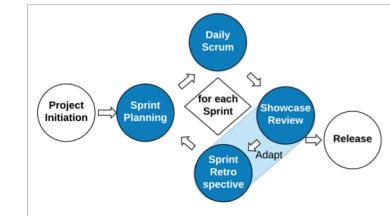


# Compare SDLCs

When to choose Formal Models?



When to choose Agile Models?



When to choose a hybrid model?

from Lecture 2, slide 27



# Today's aim

Explore the **relationship** between  
projects and processes

Discuss in small groups and share  
ideas.



# Planning Phase

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The second Project Management **process**: planning

from Lecture 2, slide 16 & 17

**Approach:**

team resources & structure,  
project goals & characteristics

**Processes:**

formal or agile SDLC phases

**Activities:**

Formal: Requirements Analysis, or  
Agile: Groom Product Backlog

Decompose the plan!

marks given in assignment  
when you identify the SDLC  
phase names and specify which  
activities belong in this phase

**Tools:**

hardware, operating system  
programming languages, libraries,  
network, ecosystem, IDEs



## Case Study 2 –Language Research Tool Project

Determine the goals & key characteristics

Goal

Key Characteristics





## Case Study 2 –Language Research Tool Project

What are the challenges and risks?

**Challenges:** what would make this project difficult?

**Risks:** what could make this project fail?



# Project Analysis

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In groups of 4, **discuss** SDLC processes & activities

1) Consider the project, people & technology

1) Evaluate the team and project constraints.

2) Evaluate multiple **SDLC models**

1) Identify the advantages and disadvantages

2) Consider the outcomes and risks

3) Justify an effective **SDLC process**

1) Defend your choice of SDLC

2) List the activities done

- Formal: Requirements Specification
- Agile: Product Backlog



# Assignment 1

Due: Friday, 5th April 2019

Marks: 20%

What: Figure out an appropriate SDLC for a given Case Study

How to do well:

1. Critical analysis of Case Study characteristics and risks
2. Critical analysis of each SDLC's processes
3. Balance the pros and cons and justify your choice of SDLC

Any Questions?

next tutorial: Agile Scrum SDLC

# Thank You!